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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,912

11/21/2003

Leo M. Rozmaryn

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EXAMINER

THOMPSON, JEWEL VERGIE

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/717,912	Applicant(s) ROZMARYN, LEO M.	
	Examiner Jewel V. Thompson	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 7-10, 21-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Boatright et al (5,471,996).

**Regarding claims 1, 10, 21 and 24** Boatright et al teaches a system for measuring muscle strength of a human thumb (col. 1, lines 7-10), comprising: a first structure (20) contacting at least a portion of a back side of the hand (fig. 4); a second structure (74) contacting at least a portion of a palm of the hand, the first and second structures configured to adjustable secure the hand in a substantially fixed position (col. 7, lines 5-16); a ring (32) for receiving a thumb; a load cell (66) comprising electronics to record a force generated by the thumb; and a mechanical assembly linking the ring and the load cell to transmit the forces from the ring to the load cell (col. 6, lines 36-37 and lines 45-58 and fig. 4), wherein the mechanical assembly comprises a threaded shaft and a nut, and the ring is configured to transmit the force generated by the thumb to the threaded shaft and the nut. (26 and 28, fig. 1)

**Regarding claim 3**, Boatright teaches a beam positioned substantially perpendicular to the threaded shaft, the beam transmitting the load from the threaded shaft to the load cell (fig. 1)

**Regarding claim 4**, Boatright teaches a knob (54) for rotating the threaded shaft to adjust the position of the nut on the threaded shaft

**Regarding claim 5**, Boatright et al teaches the second structure is in a substantially fixed position (fig. 1).

**Regarding claim 7**, Boatright et al teaches a push plate; at least one push rod contacting the push plate and the first structure; a bolt secured to the first structure; and a handle threaded to negotiate the bolt, wherein upon rotating the handle in a first direction, the push plate, the at least one push rod and the second structure move in a direction to adjustable secure the hand in the substantially fixed position (fig. 1)

**Regarding claim 8, 19** Boatright et al teaches the electronics provides the capability to at least one of a) display and record forces in at least one of metric and English units; b) display and record a peak force; c) continuously display and record forces generated by the thumb; and d) reset the system prior to a next exertion of force by the thumb (col. 9, lines 29-31)

**Regarding claim 9 and 20** Boatright et al teaches a connection (112) whereby data recorded by the system can be transmitted to a computing device

**Regarding claim 22 and 25**, Boatright teaches a quantitative measure of forces generated in pure palmar thumb adduction and abduction to serve as an adjunct to grip and pinch strength in the following conditions; osteo-arthritis pre-operation and post-operation; rheumatoid arthritis pre-operation and post-operation; thumb reconstruction after trauma; reconstruction of congenital differences; following tendon transfer surgery; and/or following tumor resection and reconstruction (col. 1, lines 63-col. 2, lines 1-15)

**Regarding claim 23 and 26**, Boatright teaches the system significantly, substantially and/or completely isolates one or more muscles that are enervated by the motor breach of the median nerve or terminal motor branches of the ulnar nerve (fig. 3).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boatright et al

**Regarding claim 6**, Boatright et al fails to explicitly teach the first structure is movable to secure the hand in the substantially fixed position. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have made the first structure movable, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA 1954). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have made the first structure of Boatright et al movable for the purpose to allowing the apparatus to adjust so that any size hand can fit into the apparatus for a thumb strength measurement.

***Claim Rejections - 35 USC § 103***

3. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boatright et al in view of Stanec et al (4,236,528)

**Regarding claims 11, 12, 15, 17** Boatright et al teaches a first plate contacting at least a portion of a back side of the hand; a second plate contacting at least a portion of a palm of the hand, the first and second plates configured to secure the hand in a substantially fixed position; a ring for receiving a thumb of the hand. Boatright fails to teach a load cell comprising electronics to record a first force generated by the thumb moving in at least a first direction and to record a second force generated by the thumb moving in at least a second direction; and a mechanical assembly linking the ring and the load cell to transmit the force the ring to the load cell. Stanec et al teaches in the abstract and col. 2, lines 53-55 a means to move the thumb in an adduct and abduct direction. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have measured the thumb in a first and second direction as that of Stanec for the purpose of determining the pollicis muscle evoked by stimulation of the ulnar nerve at the wrist.

**Regarding claim 13**, Boatright et al teaches the force-measuring device continuously records forces generated by the thumb over a finite period of time (col.6, lines 45-58).

**Regarding claim 14, 18,** Boatright et al teaches the structure is adjustable with respect to the hand when the hand is in the substantially fixed position (col. 3, lines 61-64).

**Regarding claim 16,** Boatright teaches providing electronics (18) to record the force generated by the thumb; and providing a mechanical assembly linking the structure to the electronics to transmit the force from the structure to the electronics.

**Regarding claim 19,** Boatright et al teaches the electronics provides the capability to at least one of a) display and record forces in at least one of metric and English units; b) display and record a peak force; c) continuously display and record forces generated by the thumb; and d) reset the system prior to a next exertion of force by the thumb (col. 9, lines 29-31)

**Regarding claim 20,** Boatright et al teaches a connection (112) whereby data recorded by the system can be transmitted to a computing device

***Allowable Subject Matter***

4. The indicated allowability of claims 2-4 and 7 are withdrawn. Examiner looked further at the reference cited and provided evidence of the previously objected claims

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

**Applicant argues** that cited reference does not teach that the apparatus is measuring in both the adduction and abduction directions

**Examiner disagrees.** The newly cited reference does teach there is measurement in both directions



### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V. Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Jewel V. Thompson". The signature is written in a cursive, flowing style.

Jvt

October 31, 2005